

Appl. No. : 10/614,644
Filed : July 7, 2003

AMENDMENTS TO THE CLAIMS

1-92. (Cancelled)

93. (Currently amended) A self-contained adipose-derived stem cell processing unit, comprising:

a tissue collection container that is configured to receive unprocessed adipose tissue that is removed from a patient, wherein said tissue collection chamber is defined by a closed system;

a first filter that is disposed within said tissue collection container, wherein said first filter which is configured to retain a first component of said unprocessed adipose tissue and pass a second component of said unprocessed adipose tissue, such that said first filter separates said first component from said second component, and wherein said first component comprises a cell population that comprises adipose-derived stem cells and said second component comprises lipid, blood, mature adipocytes, and saline;

a cell collection chamber, which is configured to receive and concentrate said first component comprising a cell population that comprises a population of cells that comprise adipose-derived stem cells from said tissue collection container, wherein said cell collection container is within said closed system;

a conduit configured to allow passage of said first component comprising a cell population comprising adipose-derived stem cells from said tissue collection chamber to said cell collection container while maintaining a closed system;

a cell concentrator disposed within said cell collection chamber, which is configured to facilitate the concentration of said first component comprising a cell population that comprises adipose-derived stem cells so as to obtain a concentrated population of cells that comprise adipose-derived stem cells, wherein said cell concentrator comprises a centrifuge or a spinning membrane filter; and

an outlet configured to allow the aseptic removal of said concentrated population of cells that comprise adipose-derived stem cells.

94. (Currently amended) The device cell processing unit of Claim 93, wherein said tissue collection container is configured to receive lipoaspirate.

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95. (Currently amended) The device cell processing unit of Claim 94, wherein said tissue collection container is coupled to a cannula.

96. (Currently amended) The device cell processing unit of Claim 94, wherein said tissue collection container is coupled to a suction device.

97. (Currently amended) The device cell processing unit of Claim 93, wherein said tissue collection container is configured to receive adipose tissue that is removed by excisional lipectomy.

98. (Currently amended) The device cell processing unit of Claim 93, wherein said first filter has a pore size of about 20 μ m to about 5mm.

99. (Currently amended) The device cell processing unit of Claim 98, wherein said first filter is a mesh with a pore size of about 265um.

100. (Currently amended) The device cell processing unit of Claim 93, wherein said tissue collection container is configured to receive an additive.

101. (Currently amended) The device cell processing unit of Claim 100, wherein said tissue collection container is configured to agitate said adipose tissue and said additive.

102. (Currently amended) The device cell processing unit of Claim 93, wherein said adipose-derived stem cell processing unit comprises a centrifuge.

103. (Currently amended) The device cell processing unit of Claim 93, wherein said cell collection container comprises a spinning membrane filter.

104. (Currently amended) The device cell processing unit of Claim 93, further comprising a second filter configured to pass said population of cells that comprises adipose stem cells and retain material larger than said population of cells.

105. (Currently amended) The device cell processing unit of Claim 104, wherein said second filter is within said cell collection container.

106. (Currently amended) The device cell processing unit of Claim 93, wherein said cell collection container is configured to receive an additive.

107. (Currently amended) The device cell processing unit of Claim 93, wherein said cell collection container is configured to wash said concentrated population of cells that comprise adipose-derived stem cells.

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108. (Currently amended) The device cell processing unit of Claim 93, wherein the cell collection container is configured to separate said concentrated population of cells that comprise adipose-derived stem cells based on a difference in electrical charge.

109. (Currently amended) The device cell processing unit of Claim 93, wherein the cell collection container further comprises a means to agitate said concentrated population of cells that comprise adipose-derived stem cells.

110. (Currently amended) The device cell processing unit of Claim 106, wherein the cell collection container further comprises a means to agitate said concentrated population of cells that comprise adipose-derived stem cells.

111. (Currently amended) The device cell processing unit of Claim 93, wherein the cell collection container further comprises a means for washing said concentrated population of cells that comprise adipose-derived stem cells.

112. (Currently amended) The device cell processing unit of Claim 106, wherein the cell collection container further comprises a means for washing said concentrated population of cells that comprise adipose-derived stem cells.

113. (Currently amended) The device cell processing unit of Claim 93, wherein said cell collection container comprises a means to separate said population of cells that comprise adipose-derived stem cells by density gradient.

114. (Currently amended) The device cell processing unit of Claim 93, wherein said cell collection container comprises a means to separate said population of cells that comprise adipose-derived stem cells by adherence to plastic.

115. (Currently amended) The device cell processing unit of Claim 93, wherein said cell collection container comprises a means to culture cells.

116. (Currently amended) The device cell processing unit of Claim 93, further comprising a mixing container, wherein said mixing container is joined to said tissue collection container via a conduit configured to maintain a closed system, which wherein said mixing container comprises a port for the addition of an additive, wherein said mixing container is within said closed system, and wherein said cell collection container is positioned between said tissue collection container and said mixing chamber.

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117. (Currently amended) The device cell processing unit of Claim 116, wherein said second filter is positioned between said cell collection container and said mixing container.

118. (Currently amended) The device cell processing unit of Claim 117, wherein said second filter has a pore size of between 20 μ m and 200 μ m.

119. (Currently amended) The device cell processing unit of Claim 93, further comprising a temperature controller